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CANTOR COLBURN, LLP
20 Church Street
22nd Floor
Hartford, CT 06103

EXAMINER	
THOMAS, JAISON P	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARK D. ELKOVITCH

Appeal 2009-1957
Application 10/797,298
Technology Center 1700

Decided:[1] May 13, 2009

Before BRADLEY R. GARRIS, CATHERINE Q. TIMM, and KAREN M. HASTINGS, *Administrative Patent Judges.*

HASTINGS, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-17, 20-24, and 41. We have jurisdiction under 35 U.S.C. § 6.

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

We AFFIRM.

STATEMENT OF THE CASE

Appellant claims an electrically conductive composition.

Representative independent claim 1 reads as follows:

1. An electrically conductive composition comprising:

a polymeric resin;

a nanosized dispersion agent that is electrically non-conducting; and

carbon nanotubes, wherein the composition has an electrical volume resistivity less than or equal to about 10^8 ohm-cm, and a notched Izod impact strength greater than or equal to about 5 kilojoules/square meter.

The Examiner rejects all of the appealed claims (*i.e.,* claims 1-17, 20-24, and 41) under 35 U.S.C. § 102(b) as being unpatentable over Shibuta (WO 97/15935 published May 1, 1997).

The Examiner also rejects dependent claims 4-8 and 11-14 under 35 U.S.C. § 103(a) as being unpatentable over Shibuta and ANI[2].

Appellant's arguments focus on independent claim 1 only (Br. 6-8[3]). None of the dependent claims, including those which have been separately rejected, have been separately argued in this appeal. Therefore, dependent claims 2-17, 20-24, and 41 stand or fall with claim 1.

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[2] Internet Archive Wayback Machine, Applied Nanotech, Inc., http://www.applied-nanotech.com/cntproperties.htm (April 5, 2003) (hereafter ANI).

[3] All references herein are to the Appeal Brief filed November 14, 2007.

ISSUE

Has Appellant shown reversible error in the Examiner's finding that Shibuta describes an electrically conductive composition as claimed? This issue turns on whether Shibuta's composition includes a dispersion agent which is "electrically non-conducting" as recited in claim 1.

FINDINGS OF FACT

Appellant does not dispute the Examiner's finding that Shibuta describes a composition including a polymeric resin, nanosized metal oxide particles, and carbon nanotubes that would inherently possess the claimed electrical volume resistivity and impact strength properties (*see*, Ans. 4; *see generally* Br.).

Appellant's composition includes a nanosized dispersion agent that is "electrically non-conductive". Appellant's Specification states that the dispersion agents "are generally ceramic particles such as metal oxides" (Spec. 13, para. [0036]) and that "[s]uitable examples of metal oxides are . . . titanium oxide, [and] zinc oxide" (Spec. 13, para. [0038]).

The Examiner correctly finds that Shibuta describes its "conductive metal oxide particles as including titanium oxide and zinc oxide" (Ans. 3, 4).

The Examiner also correctly finds that Shibuta describes using unmodified metal oxides (e.g., zinc oxide or titanium oxide) and/or metal oxides in which a "different element" may be added "as necessary" to increase the electrical conductivity of the metal oxide (Shibuta, p. 6, l. 37 to p. 7, l. 10; Ans. 6, 7).

PRINCIPLES OF LAW

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior

art reference." *Verdegaal Bros. v. Union Oil*, 814 F.2d 628, 631 (Fed. Cir. 1987).

It is well established that a prior art reference without express reference to a claim limitation may nonetheless anticipate by inherency, even when artisans of ordinary skill may not have recognized the inherent characteristics or functioning of the prior art. *In re Cruciferous Sprout Litigation,* 301 F.3d 1343, 1349 (Fed. Cir. 2002).

A reference may anticipate a claim even if the reference "teaches away" from the claimed invention; whether or not a reference "teaches away" from the invention is not germane to an anticipation rejection under 35 U.S.C. § 102. *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*, 246 F3d 1368, 1378 (Fed. Cir. 2001).

ANALYSIS

Appellant only disputes the Examiner's finding of anticipation by contending that Shibuta teaches away from the use of its explicitly disclosed metal oxides (e.g., titanium oxide and zinc oxide) (Br. 7) and thus Shibuta does not describe "an electrically non-conducting dispersion agent" (Br. 8). Specifically, Appellant contends that "[b]y emphasizing the use of electrically conductive particles, Shibuta teaches away from the presently claimed electrically non-conductive particles" (Br. 7). This is not persuasive of error, since "teaching away" is not a relevant factor in a rejection made under 35 U.S.C. § 102. *Bristol-Myers Squibb Co.,* 246 F.3d at 1378. Accordingly, we attach no probative value to this argument.

There is no dispute that Appellant's claimed "dispersion agent that is electrically non-conductive" encompasses metal oxides, such as zinc oxide or titanium oxide (Spec. 13, paras. [0036], [0038]). Metal oxides, including

zinc oxide or titanium oxide, are expressly listed in Shibuta for inclusion in the composition therein. As explained in *In re Papesch*, 315 F.2d 381, 391 (CCPA 1963), "a compound and all its properties are inseparable; they are one and the same thing." The fact that Shibuta does not expressly state that the zinc oxide or titanium oxide described therein is "electrically non-conducting" is of no moment where, as here, the reference teaches each and every limitation of the claimed composition either expressly or inherently. Appellant has not provided any credible evidence that the metal oxides disclosed by Shibuta lack the claimed property of being electrically non-conducting. To the contrary, Appellant agrees that zinc oxide and titanium oxide are "electrically non-conducting" (Br. 7)[4].

Accordingly, we regard as reasonable the Examiner's determination that "Shibuta's mischaracterization of the oxides as being conductive is immaterial to the fact that there is a chemical identity between the components of the Shibuta composition and the components used in Applicant's instantly claimed composition" (Ans. 7).

We further note that claim 1 encompasses a composition with as little as a trace amount of "electrically non-conductive" nanosized dispersion agent, e.g., of nanosized zinc oxide or titanium oxide. In addition, Shibuta describes using unmodified nanosized metal oxides (e.g., zinc oxide or titanium oxide) and/or metal oxides in which an additional element may be added "as necessary" to increase its electrical conductivity (Ans. 6, 7; Shibuta p. 6, l. 37 to p. 7, l. 10). The use of the open-ended language

[4]Appellant relies upon Shibuta 934 (WO 97/15934 published May 1, 1997) as evidence to show that Shibuta knew that these metal oxides were electrically non-conductive (Br. 7).

"comprising" in claim 1 permits the presence of additional unclaimed elements, such as the additional "different element to produce an oxygen deficiency" disclosed in Shibuta to increase the electrical conductivity of the metal oxide (p. 7, ll. 3-9).

For all of the above stated reasons, as well as those expressed in the Answer, the appeal record provided by Appellant fails to show that Shibuta does not describe a composition as claimed.

CONCLUSION

Appellants have not shown error in the Examiner's finding that Shibuta describes an electrically conductive composition including an "electrically non-conducting" dispersion agent as claimed.

We sustain, therefore, the Examiner's § 102 rejection of all the appealed claims as being anticipated by Shibuta, as well as the Examiner's § 103 rejection of claims 4-8 and 11-14 as being unpatentable over Shibuta and ANI.

ORDER

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(v)(2008).

AFFIRMED

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Application 10/797,298

CANTOR COLBURN, LLP
20 CHURCH STREET
22ND FLOOR
HARTFORD, CT 06103